DOCUMENT RESUME

ED 085 571 CE 000 757

AUTHOR	Moore, E. B., Jr.; And Others
TITLE	Articulation of Post-Secondary Programs in Occupational Education.
INSTITUTION	Center for State and Regional Leadership, Florida.; Florida State Univ., Tallahassee. Dept. of Higher Education.
SPONS AGENCY	Kellogg Foundation, Battle Creek, Mich.
PUB DATE	Nov 73
NOTE	62p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Articulation (Program); Educational Philosophy; *Junior Colleges; Post Secondary Education; State Surveys; Vocational Education; *Vocational Schools
IDENTIFIERS	Florida; Georgia; Mississippi; Tennessee

ABSTRACT

Changes in the philosophy of education have given rise to problems of articulation of occupational education. While many of the problems have been present since the founding of the U.S., the expansion in numbers of and need for occupational institutions and community junior colleges have emphasized the problems. A status study of occupational program articulation efforts between vocational-technical schools and junior colleges in four Southeastern States (Florida, Georgia, Mississippi, and Tennessee) was made to determine institutional characteristics (geographic proximity of the two types of school, a comparison of occupational programs offered, credit offered, and the administrator's view on program design which could affect the perceived need for articulation); the nature and extent of present articulation practices; and suggestions for their improvement. The study was limited to public post-secondary vocational-technical schools and junior colleges in the four States. A 90 percent return of usable questionnaires indicated considerable duplication of programs with little articulation realized. Articulation at the local level was apparent, but insufficient in terms of the magnitude of the problem. It was recommended that each institution exert an effort to overcome the identified deficiencies in articulation practices. (AG)

ARTICULATION OF POST-SECONDARY PROGRAMS IN OCCUPATIONAL EDUCATION

ED 085571

By

E. B. Moore, Jr.
Nathaniel D. Smith
E. L. Kurth

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

COLLEGE OF EDUCATION

Florida State University

FILMED FROM BEST AVAILABLE COPY

CE 000 757

ED 085571

ARTICULATION OF POST-SECONDARY PROGRAMS IN OCCUPATIONAL EDUCATION

BY

E. B. Moore, Jr.
Auburn University
Auburn, Alabama

Nathaniel D. Smith
Tarrant County Junior College
Fort Worth, Texas

E. L. Kurth
Auburn University
Auburn, Alabama

Division of Educational Management Systems
The Florida State University
Tallahassee, Florida

November, 1973

A Publication of the Center for
State and Regional Leadership
(Florida State University/University of Florida)
with the Assistance of a Grant from the
W. K. Kellogg Foundation

FOREWORD

The topic of articulation is well known in American education. The problem involved, however, is international in scope. Review of the professional literature of the educational systems in Europe, South America, or Asia reveals an ongoing effort to overcome artificial barriers to an educational continuum. The problem relates to the fragmented educational structure as well as the historic separatism between academic and occupational education.

The bulk of the literature dealing with articulation has been addressed to the need for continuity between lower division and upper division academic programs at the collegiate level. Only recently has attention been given to articulation within occupational education. Furthermore, since occupational education historically had been perceived as terminal in nature at the point of job entry, little importance was attached to the need to establish smooth transition from secondary to post-secondary level occupational programs. More has been written on articulation of occupational education needs during the last two years than had been written during the previous two decades.

It is refreshing to find a joint effort between an "occupational educator" and "academic educator." This monograph was developed through cooperative efforts of Dr. E. L. Kurth, a nationally known vocational/technical education leader and Dr. E. B. Moore, Jr., Director of the Community College Leadership Program at Auburn University. Nathaniel B. Smith was a product of the training program at Auburn University and directed his dissertation efforts toward this important articulation area.

The FSU/UF Center for State and Regional Leadership is a partnership program dedicated to advancement of action research and personnel development for state, regional, and national education agencies. It is supported in part by a grant from the W. K. Kellogg Foundation. This publication is dedicated to encumbent officials responsible for post-secondary programs in occupational education in two-year colleges and institutes. We appreciate the efforts of these authors to develop this report of action research covering four states in the southeastern region of the country. Appreciation is also extended to my colleague and co-director of the FSU/UF Center, Dr. James L. Wattenbarger, Institute of Higher Education, University of Florida for his assistance in reviewing the manuscript.

Louis W. Bender
Professor of Higher Education

TABLE OF CONTENTS

FOREWORD

LIST OF TABLES

CHAPTER I. ARTICULATION: A MAJOR PROBLEM 1

Introduction
National Concern with the Problems of Occupational Education Articulation
State Efforts Related to the Articulation of Occupational Education

CHAPTER II. ARTICULATION IN FOUR STATES: A STATUS STUDY 13

Definition of the Problem
Purpose of the Study
Assumptions of the Study
Delimitation of the Study

An Overview of the Study

Characteristics of the Two Types of Institutions in the Region Surveyed

Geographic Proximity of Vocational-Technical Schools and Junior Colleges as Reported by the Study
A Comparison of the Nature of Occupational Programs in Junior Colleges and Vocational-Technical Schools on the Basis of the Type Credit Awarded at the Trade-Skills and Technical Levels
A Comparison of the Extent of Occupational Programs Offered in Junior Colleges and Vocational-Technical Schools Reported at the Trade-Skills or Technical Level
Perceptions of Administrators on Program Design Which Could Affect the Perceived Need for Articulation

The Extent and Nature of Articulation Practices in the Two Types of Institutions Surveyed

Practices Related to Curriculum Content Coordination
Practices Related to Staff Interaction and Student Interaction

Practices Related to the Joint Use of Facilities and Equipment
Practices and Information Related to Leadership Coordination

Comments of Respondents on Existing Practices and Suggested Improvements for Occupational Program Articulation

Curriculum Related Comments
Leadership Related Comments
Facilities and Equipment Comments
Comments Related to Staff and Students
Comments on Financing

CHAPTER III. SUMMARY, CONCLUSIONS, RECOMMENDATIONS, AND SUGGESTIONS FOR FURTHER STUDY 41

Summary
Conclusions
Recommendations
Suggestions for Further Study

CHAPTER IV. EPILOGUE 51

BIBLIOGRAPHY 55

LIST OF TABLES

1. A Summary of Responses by State and Type Institution 16

2. A Comparison of Business Occupation Programs by Level and Type Institution 19

3. Comparison of Practices Related to Coordination of Curriculum Content by Type Institution 23

4. Comparison of Staff and Student Interaction Practices by Type Institution 26

5. A Comparison of Who Should Provide the Major Impetus for the Development of Occupational Programs Articulation Between Vocational-Technical Schools and Junior Colleges 33

CHAPTER I

ARTICULATION: A MAJOR PROBLEM

Introduction

Historically, education in the United States has usually mirrored the conflict between the philosophical ideals of Christian democracy and the weaknesses of individual and collective human nature.

While equal educational opportunity may not have been a stated purpose of education among the Puritans of Massachusetts or the planters of Virginia, the religious and political ideals which shaped the actions of American leadership provided precedent and direction to an evolving concept of public support for expanding educational opportunity to all citizens.

From the Puritan educational laws of 1642 and 1647 (Tyack, 1967, p. 1) to the precedent setting federal legislation of 1963, 1968, and 1972, one of the continuous themes has been the expansion of educational opportunity to a wider spectrum of society. Like most other idealistic goals this one too could probably never be fully attained, but only be sought after through continuing efforts for improvement.

Negating all the geographic, social, cultural, economic, and political factors, the tremendous array of individual differences alone would probably deny the democratic ideal of equal educational opportunity. This, however, should not deter dedication to the expansion of equal educational opportunity; for even in the face of glaring inequities

there is justifiable pride in the great progress this nation had made in providing increasing educational opportunity to all its citizens.

Traditionally the challenge for more and better education had been met through the creation of systems of educational institutions designed to meet certain levels of educational need and specialization. The complexity of institutional stratification resulting from this natural development could become self-defeating if strenuous efforts at articulation were not implemented. The conception of the tasks to be performed by the public schools had widened enormously from the narrowly conceived education programs of 300 years ago. In the relatively simple and agrarian society of the early colonial period it seldom occurred to anyone that a small child would need to know much more than the rudiments of the three R's, and indeed many felt that most children did not need even that. At the higher levels of education the conception of education was much broader, but it was universally assumed that only a small minority of boys either could or should go on to secondary or higher education. The vision of the needs of children and of youth had become vastly expanded in the light of a highly complex form of society. Not only were the fundamental subjects of the three R's now required, but the complexities of life required attention to other factors. These factors now included health, vocational preparation for an industrial society, personal adjustment in an age of tensions, and education for citizenship in internationally interdependent nations (Butts, 1953, p. 566).

The widespread changes in organizational patterns and the rapid growth at all levels of the educational system made it more difficult to refer in traditional terms to elementary, secondary, and higher

education. Instead of attempting to define the separate roles and parameters of each stratification that had developed out of historical need, and administrative expediency, it was becoming increasingly apparent that more unifying and integrating concepts were needed to meet current and future conditions.

For example, were kindergartens and nursery schools a part of elementary or "pre-elementary" education? Was a junior high school a part of elementary or secondary education? Was a junior college a part of secondary education or higher education? And more recently were area vocational-technical schools an adjunct of secondary education or junior colleges or both? Since some were designated as part secondary was there any articulation between these and junior colleges? Although each school system and each theorist might have had slightly different answers to such questions as these, an emerging and somewhat different four-fold pattern had begun to appear.

Many educators preferred a change of names to indicate somewhat the new conception of the developmental patterns in the educational system. "Childhood education" would refer to the period from the earliest care and education of children outside the home to about the age of twelve; "youth education" would refer to the educational experiences from early adolescence through later adolescence in the late teens; "higher education" would refer to study leading to bachelor and higher degrees; and "out-of-school" education would refer to the vast network of formal and informal opportunities for continuing educational experience for adults through maturity and old age. The older terms of elementary, secondary, trade school, and junior college would doubtless remain for a long time, but there was no doubt that their meanings were changing (Butts, 1953, p. 588).

Expanding educational opportunity would require a wider variety of educational options in the existing system, and increased opportunity for the individual to matriculate easily through the system in quest of personally satisfying and often changing goals.

The record of education in western civilization had shown a consistent dichotomy between minimum practical education for the masses and a more extensive and classical education for a ruling aristocracy. Against this background it was not surprising that our forefathers' struggle for freedom with liberty and justice for all would not be easily accomplished in this new land.

Even with the coming of the Industrial Revolution and the accompanying demand for a better educated working class, the increasing need for specialized skill development often took precedent over the need for a more democratic social consciousness. Thus the perpetuation of class status took on a new dimension with the separation of so-called vocational and academic studies in the schools. Many thinkers from Benjamin Franklin to John Dewey saw the weaknesses in the developing system and argued wisely for reform. But the force of tradition and evolving economic pressures resulted in the present multiplicity of institutional types as opposed to a hierarchy of comprehensive institutions. However, recent economic, social, and political developments had required consideration of plans for a more comprehensive and better articulated education system. For example, it was evident that the accumulation of scientific knowledge had been accelerating exponentially, so that in recent decades the more advanced world societies had been almost overwhelmed with an information explosion. Men had attempted to harness this information with a technology which would convert it to useful

purposes. Industries built around the continually developing technologies had utilized new materials and processes in an ever-widening spiral. The productivity resulting from such enterprise brought an increasingly higher standard of living, but this productivity was completely dependent upon a carefully educated and skillfully trained manpower (Graney, 1964, p. 22).

Since the beginning of the Industrial Revolution, the dependence of productivity upon unskilled labor had been diminishing, and the communication gap between the professional and the craftsman had been widening. Both trends had accelerated at a rate comparable to the growth of the industrial enterprise. These trends meant that increasing numbers of workers who would have served in earlier periods as unskilled laborers had to acquire an ability to perform at a higher level. The trend also meant that the professional himself had moved so far upward in the realm of creativity and theory that the aforementioned communication gap was vast enough to require a whole spectrum of post-secondary education programs to bridge it. Automation had taken over much of the drudgery of industry, and scientists and engineers had concerned themselves more and more with complex equipment such as nuclear reactors and electronic computers (Graney, 1964, p. 29). It had become increasingly apparent that the need for post-secondary career education was crucial. Vocational-technical schools and junior colleges had both been called upon to meet this need. Thus the successful incorporation and articulation of these programs into the existing educational system in sufficient quantity and quality to meet present and future needs was a basic problem (Smith, 1966, p. 46).

While continuing education for marketable knowledge and skills was still the vital first dimension in maintaining our socio-economic order

and current standard of living, the analogy could probably be drawn between our sociological development and Maslow's (1968, p. 21) hierarchy of individual needs. That is, having achieved a marked degree of success in meeting the first two levels of needs, physical and security, the third and fourth levels, belonging and esteem, become increasingly more important.

The continuing pressures to deal more effectively with these humanistic issues was the responsibility of all social agencies including the public schools. The disenfranchised and alienated could no longer move West, they only moved on to the streets and welfare rolls. What specialized education had, and was continuing to do, to meet physical and security needs, comprehensive education would increasingly be pressured to do to meet the needs of belonging and esteem. Some of the proportions and potentials of the challenge had been ably portrayed by Toffler (1971), and Reich (1971).

Evidence of the school system's effort to cope with the changing demands could be seen in the maturation of the comprehensive high school model occurring simultaneously with the community-junior college movement of the twentieth century. These developments had created a system of secondary and post-secondary education unmatched anywhere in the world. They had made possible not only more education for all but also more educational opportunities and choices for all. This simultaneous evolution had also created a myriad of problems, among which was that of achieving effective articulation between the educational levels and programs.

As we moved through the twentieth century there had been an ever-growing commitment to the concept of true universal education with equal

opportunity for all citizens. In order to achieve that objective in an increasingly complex and expanding society, it would be necessary to alter the long-standing hierarchy of education steps which had overemphasized the demand for bachelors degrees and perpetuated a negative status stigma for other equally legitimate educational goals (Miller, 1967, p. 3).

Paradoxically it has been the colleges and universities who first broke the liberal arts tradition and moved toward comprehensiveness with offerings in the practical studies of agriculture, business, and engineering. It was likewise the four year schools who first concerned themselves with the implementation of articulation practices. The primary purposes of this activity, however, was to maintain standards by screening out those labeled as the unworthy, rather than increasing the opportunities available to more individuals.

The development of inter-level coordinating mechanisms was symptomatic, however, of both the college's desire to maintain standards as well as the need to improve transition and coordination between educational levels (Rudolph, 1962, p. 437).

Continuing concern for articulation leading to the professional occupation levels was evidenced by many studies over the years. The junior college as the newest link in the ladder of American education had been the particular concern of academic articulation effort in the past decade as indicated by the work of the Center for the Study of Higher Education at the University of California (Kintzer, 1970, p. 134).

The philosophical shift in the role of the junior college to meet the needs for post-secondary career education at the skilled and semi-professional level had also focused attention on the articulation problems in this area.

Comprehensive community colleges were manifestations of the rising demand for increased education opportunity at the post-secondary level associated with rapid industrialization and urbanization. Many of the public two-year colleges were developing a broader concept of their role, recognizing that, if they were to provide meaningful options for students who had not yet made a firm career choice, they must offer a wider range of educational programs. To increase educational opportunity some means was necessary to have educational services which were appropriate to individual interests available to all. Higher education needed to be expanded so that there was opportunity within the total system of higher education in each state for each qualified person. This was not interpreted to mean universal attendance but universal access (Glockner, 1971, p. 2).

Recent concern for the problem of articulation of occupational education was evidenced by the following quotation from the cover letter accompanying a summary survey of this topic. This letter was addressed to all state directors of vocational-technical education, and state directors of community-junior colleges.

> The ERIC Clearinghouse on Vocational and Technical Education at The Ohio State University has requested that our Center develop an information analysis paper on the topic, "Articulation of Secondary and Post-Secondary Occupational Education Programs."
>
> The problem area of articulation between secondary and post-secondary levels has been noticeably neglected in the literature and research studies. As a matter of fact, our search has produced practically no sources of substantive information on the range of problems involved between the levels for the occupational education programs. We have been told by many state officials and institutional

> officers that a variety of problems and issues exist. These problems or issues range from acceptability of previous training and recognition of skill or competency mastery to lack of cooperation between professional personnel in different types of institutions. (Bender, letter to state directors, December 4, 1972).

Concern with articulation of occupational education across the nation has been amply documented in Bender's excellent monograph (1973). Thus, the authors will present a brief summary of the concerns reported by Bender together with some developments which have occurred since February 1973.

National Concern With the Problems of Occupational Education Articulation

Title X of Public Law 92-318 gives recognition to the necessity for coordination of two year post-secondary education programs. This act provides a mechanism which, if implemented, can establish the channels of communication needed to develop comprehensive occupational education programs. It is unfortunate that appropriations have not been forthcoming to permit full implementation of this landmark legislation.

A recent article by Martorana and Sturtz (1973) traces the development of the Higher Education Amendments of 1972. The political processes and the forces affecting the enactment of this law are fully described. The forces which detered passage of community college legislation for almost ten years are still with us and in our opinion must bear at least part of the responsibility for the failure to implement the provisions of Title X and specifically the Commissions called for in Section 1202 of PL 92-318. The internecine strife among vocational and other educators seems nowhere in sharper focus than in Washington.

The national groups representing state agencies for both vocational education and community colleges recognize the need for articulation not only between programs but among institutions. The community junior college group is specific in its listing of major problem areas (Bender, p. 28). A task force of the Education Commission of the States has also stressed the need for coordinated educational programs. A national conference on post secondary occupational education held in January 1973 in New Orleans called for the establishment of meaningful communication among all interest groups leading to an articulated effort at state and national levels (The Florida State University and University of Florida Center for State and Regional Leadership and The Ohio State University Center for Vocational and Technical Education, 1973).

State Efforts Related to the Articulation of Occupational Education

Most of the studies dealing with the subject of articulation of occupational programs within states were concerned with statements of problems and problem areas or a listing of goals and objectives to be achieved. Bender (1973) describes two studies, the results of which give some insight to attempts being made to solve articulation problems.

> From these two studies, the picture is clear. Separatism still exists with the nature and degree of difficulty in articulation directly related to the relationships of the agencies involved. Where vocational and technical education and post-secondary institutions such as the community colleges are under the same state organizational structure, the likelihood is greater that articulation is being fostered from the state through the local and institutional levels. State organizational structure has a significant impact on the articulation of secondary and post-secondary occupational education. Where structures foster separate jurisdictions, special efforts must be made to form lines of communication and interworking relationships if articulation is to be

> successful. Coordinating councils or even informal regular meetings of the state directors involved have been effective mechanisms to achieve this goal. At least two states reported that a higher echelon had been imposed over the state agencies to force coordination because of earlier adverse relationships...

Mundt (1973) conducted a state level survey to determine the status of existing statewide organizational structures between community junior colleges and vocational technical schools. Of the 33 states responding, 17 indicated that the vocational technical schools serving post secondary students in their states had become part of the community junior college system. Seventy-six percent of this group also reported a cooperative relationship existed between the operational elements within these combined systems. Of the 16 out of the 33 states reporting separate systems of vocational technical schools and community junior colleges 50 percent complained of duplication, conflict, confusion and competition, while the other 50 percent reported a cooperative relationship or made no particular reference to dissatisfaction with the separate systems.

To state that there is a dichotomy between two year occupational institutions and community junior colleges would be trite. What is more disturbing than this dichotomy is the fact that almost everyone recognizes the problem but there are few that are willing to attempt a solution. It would appear that self-interest and mutual distrust among the leadership at times takes precedence over the needs of students.

The problems of occupational education articulation are not new to most state and local school systems. Articulation encompasses a broad range of activities. Moreover, it is obvious from the literature that the problem area is one of growing and widespread concern, and of such

magnitude that it deserves focus and definition in its own right. While inc easing attention is being given to this area, the literature revealed no widespread practices to implement solutions to the problems at the local level.

CHAPTER II

ARTICULATION IN FOUR STATES--
A STATUS STUDY

On the basis of the background information described in the preceding chapter, a status study of occupational program articulation efforts between vocational-technical schools and junior colleges in four Southeastern states was made to determine institutional characteristics such as geographic proximity, program offerings, type of credit awarded, and the nature and extent of present articulation practices and suggestions for their improvement. From these findings better decisions might be made in improving articulation implementation. The problem posed was to determine the status of occupational program articulation between post-secondary vocational-technical schools and community junior colleges in the states of Florida, Georgia, Mississippi and Tennessee. (For greater detail and copies of the instruments used see Smith, 1973).

Definition of the Problem

Purpose of the Study

The purpose of the study was to gather articulation information and recommendations which would assist in identifying some practices and problems of post-secondary occupational education articulation between vocational-technical schools and community junior colleges. Such information would hopefully provide a basis for more rational

decision-making in planning for articulation improvements, as well as identifying directions for further study. More specifically the study sought to determine:

- educational and program characteristics which would indicate the need for improved articulation of occupational programs between vocational-technical schools and junior colleges in the region surveyed.
- the extent of articulation activity, with respect to occupational programs, between public post-secondary vocational-technical schools and junior colleges in the region surveyed.
- the identity of some major problem areas with regard to the articulation of occupational education programs between public post-secondary vocational-technical schools and junior colleges in the region surveyed.
- means of improving the articulation of occupational education programs between public post-secondary vocational-technical schools and junior colleges in the region surveyed.

Assumptions of the Study

The following assumptions underlie the design and development of the study. Since all junior colleges and area vocational-technical schools in a given geographical region were included it was assumed they:

- had similar educational and program characteristics and needs.
- faced similar problems of articulation in occupational programs.
- were aware of the need for articulation practices in occupational programs.
- would recommend improvements for the articulation of occupational programs.

Delimitation of the Study

This study was limited in that the investigation involved only public post-secondary vocational-technical schools and junior colleges in the states of Florida, Georgia, Mississippi, and Tennessee.

A study of occupational education articulation at the public post-secondary level between vocational-technical schools and community-junior colleges involved variously titled institutions from trade schools, area vocational schools, area centers, area vocational-technical centers, vocational-technical institutes, technical institutes, technical colleges, junior colleges, technical junior colleges, community colleges, community junior colleges, and comprehensive community colleges, depending on the history of development in the various institutions and states. Generally, however, these institutions fell into two major categories by title implication. These categories were vocational-technical schools and community-junior colleges.

Given the existing institutional structure for occupational education, opportunity for higher education by persons enrolled at the vocational-technical levels would have to proceed by way of the community-junior college or the non-baccalaureate technical college. Thus it was decided to delimit this study to that section of the total education articulation spectrum covered by public post-secondary vocational-technical schools, non-baccalaureate technical colleges, and community-junior colleges; an area of study in which the authors could find no major definitive study of articulation.

The study did not assume that the specific perceptions, practices, procedures, and problems reported would be found in other states or regions. Neither was it intended that they could become the basis of generalized recommendations for other states or regions.

The study was further limited by the use of a questionnaire method involving subjective statements.

An Overview of the Survey

Questionnaires were prepared for all public post-secondary vocational-technical schools and junior colleges in the states of Florida, Georgia, Mississippi, and Tennessee. There were 71 vocational-technical schools and 69 junior colleges in these states for a total of 140 institutions to be surveyed. Ninety-seven and three-tenths percent of the vocational-technical schools supplied usable returns and 82.6 percent of the junior colleges supplied usable returns. The total usable returns from the 140 questionnaires mailed was 126 or 90 percent. Table 1 provides a summary of the survey responses by type institution and states.

TABLE 1

A Summary of Responses by State and Type Institution

	Type Institution		
State	Junior College	Vocational-Technical School	Total
Florida	26	20	46
Georgia	7	24	31
Mississippi	14	see note	14
Tennessee	10	25	35
TOTAL	57	69	126

(Note: Vocational-technical schools are integral parts of junior colleges in the State of Mississippi)

Characteristics of the Two Types of Institutions in the Region Surveyed

The first items of the questionnaire were designed to provide pertinent information about the characteristics of the institutions in the region and the nature of the occupational programs offered whether it was a vocational-technical school or junior college reporting.

Only two junior colleges of the total respondents indicated they offered no occupational programs. These two responses along with the six others who submitted incomplete data, or could not participate, were not used in the data compilations.

Geographic Proximity of Vocational-Technical Schools and Junior Colleges as Reported by the Study

It was found that 82.5 percent of the junior colleges responding were within 50 miles of a vocational-technical school. Of the vocational-technical schools responding 84.1 percent reported at least one junior college within 50 miles. These data would thus indicate that approximately 82 percent of the vocational-technical schools and junior colleges in the region surveyed were within reasonable geographic access of each other. Slightly over half of the junior colleges responding (56.1%) reported having two vocational-technical schools within a 50 mile radius while 50.8 percent of the vocational-technical schools reported having two or more junior colleges within 50 miles. The high incidence of geographic proximity between these two types of institutions would indicate that many types of program articulation could be worked out.

A Comparison of the Nature of Occupational Programs in Junior Colleges and Vocational-Technical Schools on the Basis of the Type Credit Awarded at the Trade-Skills and Technical Levels

Of the institutions reporting, 91 percent of the vocational-technical schools awarded clock hour certificate credit for their technical level

programs while 86 percent of the junior colleges awarded associate degree credit in programs they also defined as being offered at the technical level. Only five point four percent of the vocational-technical schools awarded associate degree credit. This was to be expected in light of accrediting procedures which limit associate degree credit to the collegiate level. This is not intended to question efforts to maintain quality programs but to point out that the student who chooses an occupational experience in the vocational-technical school as opposed to the same experience in a junior college may have limited his opportunity for upward educational mobility and this was an articulation problem pointed out by the data gathered.

Trade-skills programs in the vocational-technical schools almost unanimously (98.5%) awarded clock hour certificate credit for these type programs. For these same types of programs in the junior colleges, however, 54.2 percent awarded clock hour certificate credit while 33.3 percent awarded associate degree credit. Twelve point five percent of the junior colleges awarded both types of credit to various trade-skills programs. An interesting point was why one-third of the junior college trade-skills occupational programs awarded associate degree credit while in other institutions in programs at this same level students were awarded clock hour certificate credit.

In comparing data concerning major occupational categories it was found that all reporting institutions offered programs in business and business related occupations. However, when comparing the level at which the instruction was offered a wide discrepancy among institutions was disclosed. Table 2 reflects a comparison by type institution and the level at which the program was offered.

TABLE 2

A Comparison of Business Occupation Programs
By Level and Type Institution

Level	Type Institution			
	Junior College		Vocational-Technical School	
	Number	Percent	Number	Percent
Trade-skills	4	7.0	56	81.2
Technical	30	52.6	3	4.3
Both	23	40.4	10	14.5

When considering geographic proximity and the universality of offerings in the business field, the articulation problem becomes more clearly defined. It appears that the junior college student has a wider range of educational opportunity since 93 percent of the institutions reporting provide instruction in business, either at the technical or both the trade and technical levels. Yet only 18.8 percent of the vocational-technical schools provide programs with similar flexibility.

A Comparison of the Extent of Occupational Programs Offered in Junior Colleges and Vocational-Technical Schools Reported at the Trade-Skills or Technical Level

This same comparison was made for three additional fields and in the health related occupational programs 57.4 percent of the vocational-technical schools offered these programs at the trade-skills level and 16.2 percent at the technical level. In the junior colleges 15.7 percent offered health related programs at the trade-skills level while 47.4 percent offered these programs at the technical level. With only 12.3 percent of the junior colleges offering the health related programs at both

the trade-skills and technical level, but, with over half of both types of institutions providing programs in this occupational field, the articulation of these efforts to assure coordination with needs and opportunity for continuous individual advancement would appear to be of vital importance.

With approximately 75 percent of the junior colleges and 93 percent of the vocational-technical schools reporting occupational programs in the service related occupations the articulation of these types of programs would seem desirable. Of the vocational-technical schools 82.6 percent reported service related programs at the trade-skills level while only 17.6 percent of the junior colleges did so, but of the junior colleges reporting 40.4 percent offered service related programs at the technical level and 14.1 percent offered these types of programs at both levels.

Just over two-thirds of all the institutions reported programs in the industrial related occupations with approximately 67.9 percent of the junior colleges and 70.6 percent of the vocational-technical schools offering these types of programs. While these figures may appear low in comparison to the other areas, it probably represents a sizeable commitment in view of the cost involved in these types of programs and the fact that the region surveyed is not one of the more highly industrialized areas of the country. These facts in themselves, however, when put together, would emphasize the strong need for articulation in this area of occupational programs to avoid needless duplication and provide for the upward mobility of students as this region becomes more industrialized.

Perceptions of Administrators on Program Design Which Could Affect the Perceived Need for Articulation

All questionnaires were directed toward the key occupational education administrator in all institutions surveyed. The data presented here relates to the perceptions of these key personnel, about basic concepts of occupational program design. These perceptions could affect the real or perceived need for articulation. When asked if they felt that a trade-skills program should provide some of the theory preparation needed to succeed in a related technical level program, 93 percent of the junior college occupational administrators said yes and 87 percent of the vocational-technical school administrators did likewise. The overwhelmingly positive response would indicate a strong shift away from the single purpose, single job, concept of occupational programs. Occupational programs as a result may need both theory and skill articulation.

When these same occupational administrators were asked if they felt that it was realistic to design occupational programs for continuous advancement as well as job entry at many skill levels, the response was almost unanimously affirmative, with 98.2 percent of the junior college respondents and 97.1 percent of the vocational-technical school respondents answering in the affirmative.

The Extent and Nature of Articulation Practices in the Two Types of Institutions Surveyed

This section presents data gathered related to the extent and nature of activities engaged in by the institutions surveyed that were considered important indicators of occupational program articulation between and within vocational-technical schools and junior colleges.

Practices Related to Curriculum Content Coordination

Table 3 shows the status of the tranferability of trade-skills credit to related technical programs, the extent of credit by examination procedures, extent of joint planning and the degree of exchange of curriculum information. The data indicated that 17.5 percent of the junior colleges reporting and three percent of the vocational-technical schools reporting accepted all clock-hour certificate credit toward the associate degree. Five junior colleges (8.8%) and 11 (16.2%) of the vocational-technical schools would accept approximately half of a student's certificate credit toward an associate degree in a related technical program. Eight junior colleges and three vocational-technical schools, fourteen percent and four point four percent respectively, reported that approximately one-fourth of a student's certificate credit could be counted toward an associate degree in a related technical program. Slightly more than two-thirds of all institutions reporting, 59.7 percent of the junior colleges and 75.0 percent of the vocational-technical schools, had no provision for the transfer of certificate credit to associate degree credit. Yet as was indicated earlier 91.0 percent of these same vocational-technical schools awarded certificate credit for their technical programs while 86.0 percent of the junior colleges awarded associate degree credit in programs reported at the technical level. This would indicate much opportunity for articulation improvement.

Thirty point four percent of the junior colleges reporting and 36.8 percent of the vocational-technical schools reporting indicated that students could earn all their occupational credit at their institutions through credit by examination on previous courses or experiences in

TABLE 3

Comparison of Practices Related to Coordination of Curriculum Content by Type Institution

Practice	Type Institution			
	Junior College		Vocational-Technical School	
	Number	Percent	Number	Percent
Acceptance of trade-skill credit on Associate Degree				
All	10	17.5	3	4.4
Half	5	8.8	11	16.2
Fourth	8	14.0	3	4.4
None	34	59.7	51	75.0
Acceptance of credit by examination in occupational skills				
All	17	30.4	25	36.8
Half	7	12.5	18	26.4
Fourth	15	26.7	10	14.7
None	17	30.4	15	22.1
Joint planning leading to acceptance of trade-skills credit				
Yes	33	60.0	37	53.6
No	22	40.0	32	46.4
Exchange of curriculum information among counterpart staff				
Frequently	29	50.9	15	22.1
Annually	5	8.8	4	5.9
Seldom	17	29.8	22	32.4
Never	6	10.5	28	39.6

similar programs. Twelve point five percent of the junior colleges reported that students could earn approximately half of their occupational credit by examination while 26.4 percent of the vocational-technical schools reported likewise. About one-fourth of the junior colleges and 15 percent of the vocational-technical schools said students could earn approximately one-fourth of their occupational credit by examination. Seventeen of the 57 reporting junior colleges (30.4%) and 15 of the 68 reporting vocational-technical schools (22.1%) had no provision for credit by examination in occupational programs.

Sixty percent of the reporting junior colleges and 53.6 percent of the vocational-technical schools indicated that they had been involved in planning discussions on this subject. This is in contrast to the lack of established procedures in this area as reported in Table 3.

However, 40 percent of the junior colleges reporting and 46.4 percent of the vocational-technical schools reporting indicated that they had not been engaged in planning efforts in this area.

The highest incidence of exchange of curriculum information was reported by junior colleges, where 50.9 percent said they frequently exchanged curriculum information with vocational-technical schools. Frequently in this case was defined as three or more times per school year. The word exchange while not separately defined for the study does indicate a reciprocal activity and the number of junior colleges and vocational-technical schools responding was approximately balanced, 57 to 69. Yet only 22.1 percent of the vocational-technical schools reported frequent exchange of curriculum information. This would seem to indicate some discrepancy in communication in this area. Only eight point eight percent of the junior colleges as compared to five point

nine percent of the vocational-technical schools reported that there was an exchange of curriculum information annually. Combining the last two categories in Table 3 it is indicated that 40.3 percent of the reporting junior colleges and 72.0 percent of the reporting vocational-technical schools seldom or never exchanged curriculum information in occupational programs.

Practices Related to Staff Interaction and Student Interaction

One indication of the degree of articulation activity should be reflected in the amount of interaction of personnel and the interaction of students between occupational programs in the vocational-technical schools and junior colleges. In this section the respondents were asked to provide information on areas of activity that should enhance the progress of occupational program articulation through the interaction of the staff managing these programs and the interaction of students involved in taking such programs.

Table 4 provides a summary of the data with regard to practices and interaction of staff and students between junior college personnel and vocational-technical school personnel. Twenty eight point six percent of the junior colleges responding indicated that their occupational personnel frequently observed instruction in related vocational-technical school programs to assess its implications for students who may wish to continue their occupational studies at the junior college. However, only two point nine percent of the vocational-technical school personnel indicated that they frequently engaged in this same type activity. When asked if occupational personnel annually observed related programs in the other type institution to evaluate its implications for continuing study, 16.1 percent of the junior colleges responded affirmatively, but

TABLE 4

Comparison of Staff and Student Interaction Practices by Type Institution

Practice	Type Institution			
	Junior College		Vocational-Technical School	
	Number	Percent	Number	Percent
Interinstitutional visits				
Frequently	16	28.6	2	2.9
Annually	9	16.1	4	5.9
Seldom	22	39.2	29	42.6
Never	9	16.1	33	48.6
Joint appointment of faculty				
Yes	16	29.1	3	4.3
No	39	70.9	66	95.7
Participation in articulation conferences				
Yes	52	91.2	48	69.6
No	5	8.8	21	30.4
Interinstitutional student interaction				
Frequently	15	26.8	4	5.8
Annually	5	8.9	1	1.4
Seldom	23	41.1	27	39.2
Never	13	23.2	37	53.6

only five point nine percent of the vocational-technical schools did so. More than 55 percent of the junior colleges reporting indicated that their occupational personnel seldom or never observed related programs in the vocational-technical schools to assess its implications for students who may wish to transfer to related technical programs. Looking at the vocational-technical schools we see that 91.2 percent seldom or never observe related technical programs in the junior colleges. As indicated by the data from both the junior colleges and the vocational-technical schools there was little personnel interaction for the purpose of related program observation and assessment.

Another indicator used to gauge the amount of articulative involvement with respect to the interaction of occupational personnel was the existence of jointly appointed staff members between related programs in vocational-technical schools and junior colleges. In responding to these items, only 29.1 percent of the junior colleges and four point three percent of the vocational-technical schools indicated that they engaged in this practice.

When responding to a questionnaire item concerned with articulation through personnel interaction as indicated by attendance of professional meetings on the subject of articulation 91.2 percent of the junior colleges and 69.6 percent of the vocational-technical schools reported personnel having been involved in such discussions.

We were also interested in the subject of student interaction between different but related occupational programs as it might occur both within the institution responding or between the vocational-technical schools and junior colleges.

This would depend of course on the range of occupational programs available within a given institution or the geographic accessibility of

the two types of institutions surveyed to each other. Respondents were instructed in the questionnaire to provide information only as it related to external articulation between the two types of institutions in all cases where the two existed within fifty (50) miles of each other. They were to relate the questions to internal program articulation only where the aforementioned condition did not exist. As reported earlier, however, the condition of both types of institutions not being accessible to each other, within the 50 mile proximity limitation, occurred in only 17.5 percent of all the junior college cases and 15.9 percent of all the vocational-technical school cases.

The opportunity for student interaction was considered an important area affecting the articulation process in occupational programs and thus an indicator of the presence of articulative efforts.

Of all junior colleges reporting, 15 (or 26.8%) said students from vocational-technical programs had frequent opportunities for interaction with students in their related technical programs. This is rather low in view of the fact that approximately 17.5 percent of the total response came from institutions reporting conditions within the junior college themselves, and thus more than likely on the same campus, or on rather closely located branch campuses. But even this response is high when compared to the response from the vocational-technical schools to the same item, where only five point eight percent said students were frequently provided the opportunity to interact with students in related technical programs in a junior college. Eight point nine percent of the junior colleges said students from the vocational-technical schools, or their own trade-skills programs, had an annual opportunity to meet students in related technical programs at the junior college. Only one

vocational-technical school reported that its students had an annual opportunity to meet students in related technical programs at a junior college.

The opportunity for occupational students to observe classes in related programs between the vocational-technical schools and junior colleges was also investigated. Of the 57 junior colleges responding 19 (or 33.3%) provided frequent opportunities for their students to observe classes in related programs. This, however, includes those junior colleges (approximately 17.5%) who were reporting internal conditions because they had no vocational-technical school within a 50 mile radius. When vocational-technical schools were asked if they frequently provided their occupational students with the opportunity to observe related technical classes in the junior colleges only one school (1.5%) responded affirmatively. Only one junior college and one vocational-technical school reported that they annually provided for students in trade-skills programs to observe classes in technical programs at the junior colleges.

Practices Related to the Joint Use of Facilities and Equipment

It was felt that efforts made to reduce the duplication of special equipment and facilities for related programs in the junior colleges and vocational-technical schools would be another of the indicators by which to determine the extent of articulation effort between these two types of institutions. This is not to imply that it is either possible, or desirable, to eliminate equipment and facility duplication, but where articulation efforts are absent unnecessary duplication is a possibility. Conversely, efforts to jointly use specialized equipment and facilities, where possible, should reflect articulative effort.

Slightly more than one third (35.1%) of the junior colleges reporting operate a joint facility with a vocational-technical school that was used by students of both the vocational-technical school and the junior college. Only five (or 7.2%) of the responding vocational-technical schools reported the operation of a joint facility. The discrepancy between junior college and vocational-technical schools reporting on this item could be accounted for by the junior colleges who were reporting internal conditions where an external vocational-technical school was not available. Even so, the existence of jointly operated and attended facilities was very low.

The incidence of jointly used specialized equipment is somewhat better than facilities. Forty three point nine percent of the junior colleges responding indicated that students in occupational programs did jointly use specialized equipment with related programs in the vocational-technical schools. However, only 14.5 percent of the vocational-technical schools reported the joint use of equipment with related programs in a junior college.

Planning efforts to establish the joint use of specialized equipment and facilities in occupational programs between vocational-technical schools and junior colleges are somewhat more extensive. Sixty four point nine percent of the junior colleges reported that they had been involved in planning discussions to establish the joint use of highly specialized equipment and facilities with vocational-technical schools. Of the vocational-technical schools responding 52.2 percent indicated that they had been involved in planning discussions involving joint use of equipment and facilities. So a majority of both type institutions were engaged in some articulation planning in this area.

Practices and Information Related to Leadership Coordination

This portion of the data deals with some items of policy and planning to control and coordinate program development so that unnecessary duplication of efforts within a given service area might be reduced or eliminated. Such efforts would be another index to articulation between vocational-technical schools and junior colleges in the area of occupational program coordination.

When asked whether unnecessary duplication of occupational programs had been eliminated 50.0 percent of the respondents from the junior colleges stated that unnecessary duplication between their institutions and vocational-technical schools had been eliminated. When this same question was posed to the respondents from the vocational-technical schools 40.3 percent indicated that they thought that unnecessary duplication of programs with the junior colleges had been eliminated. Thus, more than half of the total respondents felt that unnecessary duplication of occupational programs had not been eliminated between the junior colleges and vocational-technical schools.

The survey was also concerned with the existence of written guidelines, or policy statements, that define the area of occupational program responsibility between the vocational-technical schools and the junior colleges. Twenty nine (51.8%) of the junior colleges responding indicated that they had written policies defining program responsibilities in the area of occupational education. Thirty four (49.3%) of the vocational-technical schools indicated that they operated under written policies defining program responsibilities. The data thus indicates that approximately half of the two types of institutions had attempted to improve articulation and eliminate unnecessary duplication by formally defining areas of program responsibility.

The direct involvement of the local school governing agency in occupational education articulation was also an area of interest. Institutions were asked if their governing board had requested that they develop better coordinated occupational programs, both internally and between junior colleges and vocational-technical schools. Twenty eight (50.0%) of the junior colleges responding indicated that they had received such direction from their boards while only 12 (18.2%) of the vocational-technical schools indicated having been so directed by their boards. Fifty percent of the junior colleges and 81.8 percent of the vocational-technical schools had received no direct input from boards with regard to the subject of improving occupational program articulation.

Table 5 presents the data gathered from occupational program administrators as to how they viewed the hierarchy of responsibility for efforts toward the articulation of occupational programs.

Each respondent was asked to assign a numerical value of one to nine to a list of presented agencies and groups. The median of these numerical assignments was calculated for each item presented and the items were ranked accordingly. They are shown in the following paragraph as they were presented for ranking on the basis of considered importance in providing impetus for bringing vocational-technical school and junior college educators together to resolve articulation issues with regard to occupational programs. The items are then presented as A through I in Table 5 as they were ranked by vocational-technical school respondents and junior college respondents separately and then as a combined ranking by both types of respondents.

Respondents were asked to rank, in order of considered importance to articulation development, the following randomly arranged groups, or agencies:

A. The Local Board of Education or the Local Board of Trustees
B. The State Board of Education
C. A Specially Constituted Local Articulation Committee
D. A Specially Constituted State Articulation Committee
E. The State Director of Community-Junior Colleges
F. The State Director of Vocational-Technical Education
G. Local Vocational-Technical Schools and Community-Junior College Administrators
H. Local Vocational-Technical Schools and Community-Junior College Faculty
I. Local, State, and National Professional Associations

TABLE 5

A Comparison of Who Should Provide the Major Impetus for the Development of Occupational Programs Articulation Between Vocational-Technical Schools and Junior Colleges

Order of Ranks	Combined		Voc.-Tech. Sch's.		Junior Colleges	
	As Ranked	Median of ranks assigned to items	As Ranked	Median of ranks assigned to items	As Ranked	Median of ranks assigned to items
First	G	2.825	B	2.357	G	2.769
Second	C	4.111	G	2.929	H	4.083
Third	B	4.205	C	3.833	F	4.450
Fourth	H	4.455	D	4.350	C	4.545
Fifth	D	4.531	H	4.833	E	4.792
Sixth	F	4.682	F	4.857	B	5.125
Seventh	E	4.865	E	4.929	D	5.200
Eighth	A	6.179	A	6.167	A	6.188
Ninth	I	8.048	I	8.353	I	7.684

While the data in the combined rankings may be studied as a compromise between the views held by junior college and vocational-technical school administrators the differences between the two are relatively small when the median ranks for items are compared. The strongest exception is item B. This item has a combined ranking of third and a combined median value of 4.205. The junior college respondents placed this item sixth in importance with a median rank of 5.125 while the vocational-technical school respondents placed this same item first in importance with a median rank of 2.357. This would indicate an important difference of opinion on this item which might need consideration in planning for articulation.

The perceptions of occupational administrators on program design, as shown in the previous section, would indicate a higher degree of commitment to the concept of articulated occupational programs than was reflected by actual practices reported in this section.

Responses in this section show a higher involvement in articulative activity on the part of the junior colleges, indicating a possible need for stronger leadership and more incentive for cooperation on the part of vocational-technical schools.

Comments of Respondents on Existing Practices and Suggested Improvements for Occupational Program Articulation

The survey instrument provided the participants in the study with an opportunity to respond in writing, and anonymously, about aspects of articulation in their attendance area. They were asked to describe those existing articulation practices which they believed made the best contribution to the expansion of post-secondary occupational education opportunity in the area served by their school. They were then asked to

suggest other articulation practices which they believed would help to expand post-secondary occupational education opportunity in their attendance area. As evidenced by the number of participants who took the time to write responses to these items, occupational program articulation seemed to be a major concern. Of the 126 total respondents, 60 percent provided comments in this section of the survey, with 58 percent of the junior colleges and 62 percent of the vocational-technical schools providing discussion of their practices and suggestions for improvements. Suggestion for improvements were more frequent than comments on existing practices by a ratio of three to one.

These comments on occupational program articulation were grouped as they related to the following five categories. The number of comments in each category fell in approximately the same order as shown.

Curriculum

Leadership

Facilities and Equipment

Staff and Students

Financing

In the following outline a condensation of the comments in each of these five categories will be given. Each category will be subdivided into comments on current practices related to expanding articulation of occupational programs, followed by those practices that were suggested for further improvement. The order of presentation in the outline, from first to last, represents the frequency of comments on each particular subject. This does not necessarily imply that the order of subject presentation is the order of suggested importance, for this would have to be interpreted in light of the conditions of a particular case. Neither

is the listing intended to imply that these are all the possibilities for improvement of occupational program articulation between vocational-technical schools and junior colleges. They represent those comments reported in this survey only.

Curriculum Related Comments

Existing practices which improved articulation were,

- Cooperative curriculum development,
- Credit by examination for previous experience,
- Individualized student progression,
- Organizing programs on a quarter hour credit basis,
- Allowing early entry for high school students.

Suggestions for further improvement of articulation were to,

- Resolve the issue of credit transfer between the two institution types,
- Develop programs with the "career ladder" concept,
- Identify the occupational education role for each type institution,
- Give some state level agency the authority to regulate competition and program duplication,
- Work to destroy the image of "terminal" in occupational education,
- Expand credit by examination for previous experience,
- Place more emphasis of joint curriculum development between institutions,
- Promote individualized student progression in occupational programs based on performance,
- Increase involvement of business and industry in curriculum development,
- Reorganize separage systems into comprehensive institutions with degree credit for all programs,
- Provide developmental, or remedial, programs.

Leadership Related Comments

Existing practices which improved articulation were,

- Developed district occupational program coordinating councils with community and educational membership,
- Created individual program advisory committees,
- Initiated intra-institutional advisory committees,
- Developed close rapport between counterpart administrative personnel in the two types of institutions.

Suggestions for further improvement of articulation were to,

- Place all post-secondary occupational education under one agency at the state level,
- Involve more personnel in institution, district, and state level advisory committee work,
- Develop a state level coordinating committee for occupational programs,
- Increase authority for state level program approval,
- Develop state guidelines for articulation agreements,
- Develop better labor market data for program planning,
- Identify areas of program responsibility for different institutions,
- Expand involvement of business and industry in occupational program development,
- Have more planned meetings between counter-part administrative personnel in occupational programs,
- Establish local district coordinating councils for occupational programs,
- Get labor groups to talk to program administrators.

Facilities and Equipment Comments

Existing practices which improved articulation were,

- The joint use of facilities and equipment where junior colleges provided general and related studies and vocational-technical schools provided specialized laboratory and equipment experience,
- The joint use of computers and related equipment.

Suggestions for further improvement of articulation were to,

- Expand the joint use of facilities and equipment in occupational programs between the vocational-technical schools and junior colleges,
- Provide a state supported mobile lab program for specialized equipment needs.

Comments Related to Staff and Students

Existing practices which improved articulation were,

- Personal contact of staff in joint program development,
- Rotating counseling staff between the two types of institutions,
- Promoting inter-institution faculty visitations,
- Joint instructional staffing in related programs,
- Providing student visitations by Vocational Education Week, Career Week, etc.,
- Rotate meeting places in multi-campus districts for administrators and faculty.

Suggestions for further improvement of articulation were to,

- Promote person to person contact between administrators and faculty in occupational programs of the two types of institutions,
- Hold "Open House," "Career Day," etc., and budget money for these promotional activities,

- Make greater use of joint faculty appointments,
- Plan for joint staff development programs,
- Plan for joint curriculum development projects.

Comments on Financing

Suggestions for further improvement of articulation were to,

- Have the same type of funding for occupational programs in the vocational-technical schools and the junior colleges from both the state and federal levels,
- Provide funds for joint program planning and development,
- Provide funds for promotional work in occupational education,
- Provide funds for special off campus courses in remote areas.

CHAPTER III

SUMMARY, CONCLUSIONS, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER STUDY

Summary

The study was conducted to determine the nature and extent of articulation activities between and within post-secondary occupational programs in the public vocational-technical schools and junior colleges of the states bordering Alabama. It was hoped that such information might provide a basis for more rational decision-making in planning for articulation improvement, as well as identifying directions for further study.

All public post-secondary vocational-technical schools and public junior colleges in the states of Florida, Georgia, Mississippi, and Tennessee were included in the survey. The response indicated a strong interest in articulation with 96 percent of the 140 institutions involved responding. Ninety percent of the returns were usable and formed the basis for the data analysis.

All 126 (90% of the total) institutions providing usable returns offered some type of business related occupational programs. In the health related occupations, 74.4 percent of the junior colleges and 82.4 percent of the vocational-technical schools offered some type of training programs in this area. In the service related occupations 75.9 percent of the junior colleges and 92.7 percent of the vocational-technical schools offered some type of training programs in this area. While in the industrial related occupations 67.9 percent of the junior colleges

and 70.6 percent of the vocational-technical schools offered some type of training programs in this area. It would appear that the commitment to occupational programs by the two types of institutions was not substantially different, with the possible exception of the service related occupations where the vocational-technical schools appeared to have a somewhat stronger commitment.

With 82 percent of both types of institutions within a 50 mile, or less, commuting distance of each other and both types having strong commitments to occupational programs, articulation of effort would seem to be desirable. This problem should become even more acute as accountability continues to be stressed. It seems illogical that the public will continue to support costly duplication.

Occupational education administrators apparently recognized the increasing desirability for upward and changing occupational mobility through programs that continue to build on previous work and schooling experience. Over 90 percent of all respondents indicated that these objectives were desirable. However, this commitment was not reflected in the actual articulation practices reported.

While the commitment to occupational programs seemed similar for the two types of institutions, recognition for this type of educational experience was confusing. For programs reported at the technical level, 86 percent of the junior colleges awarded associate degree credit, but for technical level programs in vocational-technical schools students were awarded clock-hour certificate credit in 91 percent of the cases. Thus the student who chooses an occupational education experience in the vocational-technical school as opposed to that same experience in a junior college may be limiting his opportunity for upward educational mobility.

Programs at the trade-skills level in 33.3 percent of the junior colleges produced associate degree credit while 98.5 percent of the vocational-technical schools awarded clock-hour certificate credit. Over two-thirds of these institutions combined reported no provision for the transfer of certificate credit to associate degree credit, while 52 percent also reported no provision for the recognition of previous courses, or work experience, through examination procedures. Planning for the improvement of credit definition and transferability seemed low, with 40 percent of the junior colleges and 46.4 percent of the vocational-technical schools reporting no planning efforts in this particular area.

The improvement of articulation through the interaction of occupational personnel seemed largely unrealized with the highest level of activity reported in the attendance of professional meetings where the subject of articulation was discussed. Seventy percent of the junior colleges and 95.7 percent of the vocational-technical schools had no jointly appointed personnel in related programs, and 55.3 percent of the junior college occupational personnel and 91.2 percent of the vocational-technical school personnel seldom or never observed related programs in the other type of institution. Half of the junior colleges reported that occupational personnel frequently exchanged curriculum materials with related vocational-technical school personnel while only 22.1 percent of the vocational-technical schools reported such activity.

The provision for occupational students to meet and interact with students in different but related occupational programs both within and between the two types of institutions was very limited. Responses indicated that 92.8 percent of vocational-technical school students and 64.3

percent of junior college trade-skills students were seldom or never provided the opportunity to meet and interact with junior college technical program students. A similar ratio existed with regard to the opportunity to observe classes in related programs, where 97 percent of the vocational-technical schools and 64.9 percent of the junior colleges seldom or never provided their occupational students with such opportunity.

While the joint use of facilities and equipment would be tied to the proximity of the two types of institutions many operated either on the same site or within easy access of each other and the articulation of specialized and expensive programs would appear desirable. However, 64.9 percent of the junior colleges and 92.8 percent of the vocational-technical schools did not engage in any joint facility usage. Forty-four percent of the junior colleges indicated some joint use of specialized equipment in related programs but only 14.5 percent of the vocational-technical schools did so. Increasing interest in the possibilities of jointly used facilities and equipment was indicated, with 65 percent of the junior colleges and 52 percent of the vocational-technical schools reporting planning discussions in this direction.

Approximately half of both type institutions indicated that they were operating under written policies which defined occupational program responsibility. Approximately half also felt that unnecessary duplication of occupational programs had been eliminated, although articulation between the programs which were offered by the two types of institutions was still very much needed as indicated by the lack of articulative practices reported.

In seeking information from the local level as to who should provide the leadership in articulation improvement the evolutionary background of the two type institutions became apparent. Vocational-technical schools look to state level leadership first and then to local effort, while the junior colleges look to local effort first and then to the state level. This fact would have implications in planning for articulation improvement, particularly in regard to the roles of agencies and legal bodies in resolving problems of articulation.

However, as indicated by the written suggestion for articulation improvement there were areas where both types of institutions would recommend stronger statewide regulation, such as program approval to eliminate needless duplication, definition of institutional roles in occupational program responsibility, and the establishment of guidelines for articulation agreements to effectively implement those roles, plus equitable funding arrangements from the state and federal levels to eliminate jealousies and suspicions among various institutions.

Conclusions

From the information gathered, it appeared that the conditions fostering the need for improved articulation between occupational programs in vocational-technical schools and junior colleges were widespread and to a large degree recognized at the local level. It was equally apparent that there had as yet developed no major thrust to resolve these issues at the local level, though the issues were coming into focus at the national level, and to a lesser degree, at the state level.

The above is not to imply that there was no articulation effort. Evidence of articulation practices at the local level were indicated,

but by-and-large these did not match the magnitude of the problems.

This generalized conclusion was based on conclusions stated below:

- With slightly better than 82 percent of both types of institutions within fifty, or less, miles of each other and with all the vocational-technical schools and almost all the junior colleges offering some type of occupational programs, articulation of these offerings seemed very desirable.

- It would appear that there was an obvious lack of articulation and an unnecessary amount of confusion where similar learning experiences were defined by different terminology, awarded different kinds of recognition, and not transferable from one type institution, or program, to another.

- Few occupational administrators felt that occupational programs should be terminal and provide no foundation for further study, yet the single purpose separate institutions, and the bureaucracy which had developed around this system, was still at odds with this expanded concept of more comprehensive and continuing occupational education.

- While curriculum coordination of occupational programs left much to be desired, activity in this area of practice exceeded most other practices as a measure of articulation effort between the two types of institutions surveyed, indicating that perhaps the area of joint curriculum development would be a fertile area to begin articulation expansion.

- There was little articulation effort reported in the area of practices related to staff interaction and student interaction indicating not only the difficulty of this kind of effort between separate institutions but perhaps an over emphasis on accountability for time spent in skill development as opposed to the more intangible values of personal interaction in program improvement and student growth.

- While planning efforts for the joint use of facilities and equipment indicated a strong concern in this area of activity, little had been accomplished. Competition and suspicion created by differing patterns of funding from both the federal and state levels could probably account for much of the difficulty encountered in this area.

- The two types of institutions differed somewhat in their feeling about who should provide leadership in articulation improvement. Vocational-technical schools had traditionally looked to the state and federal levels for funding and guidelines, while junior-colleges had developed on a philosophy of local involvement. The proper balance in the area was a matter yet to be resolved, but occupational education could obviously no longer be considered in a local or state context alone.

The tradition of a separate system of vocational education from the rest of the education system was probably nowhere in sharper focus than between the newer concept of the comprehensive community college and the traditionally single purpose vocational trade school. In the region surveyed, while recognition of the increasing obsolescence of this duality was apparent, the mechanisms and pressures for change were just beginning to be considered and developed at the local level.

Recommendations

Increased effort should be made at each local institution whether vocational-technical school or junior college to try and overcome the kinds of deficiencies in articulation practices as identified in the study. In addition certain broader recommendations could be made in relation to an overview of the information presented in the study.

- Continued efforts to bring vocational-technical schools and community-junior colleges under the same, or closer, organizational structure at the state level should assist in efforts to improve occupational education articulation. Other studies indicated that this had been achieved in approximately half of the states.

- Continued effort to reorganize vocational-technical schools and junior colleges into comprehensive community colleges at the local level should provide for easier articulation of occupational programs and contribute to the resolution of many problems inherent in the traditionally dual systems.

- Establish statewide guidelines and recommendations for the implementation of articulation agreements on occupational programs between vocational-technical schools and junior colleges with regard to such items as credit transferability, institution program responsibility, joint use of facilities and equipment, joint faculty appointments, equitable funding between similar programs in separate institutions, competency based credit recognition, joint curriculum development projects, early entry for high school students, etc. This must not be construed as a recommendation for detailed statewide control but the state should provide the leadership, coordination, and services which are necessary in facilitating the local process of making maximum use of time, talent, and facilities for the total population.

- Develop curriculum articulation guidelines for continuous occupational growth and development within the various business, health, service, and industrial related occupational clusters.

- Develop more individualized instructional materials and techniques suited to continuous progression within the occupational cluster curriculum design.

- Continued emphasis on the "career education" concept as a means of bringing general and occupational education into an articulated relationship.

Suggestions for Further Study

This study involved a status determination of the articulation of occupational programs in the region surveyed for the purpose of providing information for decision-making in planning for better articulation of occupational programs between vocational-technical schools and junior colleges. A number of items emerged from this process which are suggested for further study.

- To determine methods for standardizing occupational credit recognition, for example, between clock-hour certificate credit and associate degree credit, and baseline standards for competency evaluation.

- To establish and expand better manpower data and its utilization in occupational program development and coordination.
- To determine cost benefit analysis in relation to more efficient occupational program operation through articulation.
- To resolve the confusion of program and course description between institutional types, and levels, of occupational education experiences.
- To determine the need for competency based occupational program evaluation.
- To assess the effect of the "career education" concept on articulation at the secondary and post-secondary level.
- To develop curriculum materials compatible with the occupational clustering approach and individualized progression.

CHAPTER IV

EPILOGUE

The research reported in the previous pages was conducted as objectively as survey techniques would permit. However, there are many attitudes, opinions, beliefs, values, and traditions which affect the responses to any given set questions. Moreover, there often are areas which cannot be adequately investigated even with the most sophisticated instruments and research design. The researchers would be among the first to agree that the present study lacks a great deal. We do believe that this study can serve as a basis for future investigation and therein may lie its value.

There are forces which have and will continue to affect articulation of post-secondary programs in occupational education. While some of these are clearly in evidence, others are not. The limited scope of our study could not encompass all the factors involved, nor can all these elements be measured empirically.

The history of education adequately documents the struggle to provide occupational education. The defensiveness of the "vocationalists" could be excused on the basis of past experience. But now technology is on the throne and occupational education is the prime minister. Why then do "vocationalists" turn deaf ears to those in the community college who are in subjection to the same king? One would have to be deaf not to hear voices ringing out of the past. Their message drones in endless repetition: "academicians" are seeking to destroy occupational education and to divide the largesse to suit their own ends.

The "academician" admits the necessity for occupational education but cannot establish an adequate dialogue with his occupationally oriented counterpart. The major issue always seems to revolve about the mix of practical and liberal arts experiences in the total program.

The result is easily observable. The "academician," usually the community college president, in response to the pressures from his constituency establishes his own occupational programs. No matter that there is a post-secondary occupational institution within a few miles.

Both the two year vocational-technical school and the community college voice the same rhetoric. The needs of the community must be met. Programs must be flexible and always responsive to those needs. It is indeed unfortunate that the flexibility does not transcend institutional boundaries.

More than three years ago the American Vocational Association and The American Association of Community and Junior Colleges held a joint invitational conference in Arlington, Virginia. This was to be the first of a series of conferences to establish a dialogue between the two major associations. It was both the first and the last of the series.

While the Congress wrestled with appropriations for higher education in 1972 and left Title X unfunded, the bureaucrats in the U. S. Office of Education fiddled with the placement of the newly authorized "Community College Unit" in the organizational structure. Meanwhile, the states argued over guidelines for the establishment of the State Post Secondary Education Commission under Section 1202 of PL 92-318. Thus, "landmark" legislation was reduced in effect to an ill-defined hillock.

There have been conferences and more conferences; task force after task force but the debate goes on. Is there little wonder that there remains competition and chaos at the local level? The public remains largely uninformed notwithstanding the plethora of advisory boards, committees, and panels. However, the economic crisis which is upon us is causing the public to look more closely at public expenditures, particularly in the field of education. We will be increasingly hard pressed to defend duplication and waste, particularly when such unnecessary expense is caused by philosophical differences and obstinance.

The literature is replete with statements of the problem. There are many studies which have sought to establish goals for articulation. This study as well as others have examined the status of articulation practices among programs and institutions. The problem is not new. Educators have been working on solutions for more than a decade.

We know that the problem is one of major proportion, yet the results of efforts to find a solution are disappointing. The study described in this monograph reveals that less than half of the institutions surveyed were making a serious effort to eliminate needless duplication and to fully articulate their efforts. We find ample evidence of discussion, but when looking at activities such as sharing of staff and facilities, acceptance of credit from other programs, and commonality in level of program offerings, little result is apparent. This fact is particularly disturbing when it is noted that the junior college respondents reported a much higher level of activity than did their counterparts in the vocational-technical schools. Even more disappointing is the major disagreement as to the locus for impetus in developing articulation agreements.

There is no easy solution. The problem is deeply rooted in the past. Fortunately, the past is over and we must not allow history to deter progress. Professional educators must become more objective as they identify present and future educational needs. Old prejudices must not be permitted to hold back growth.

Someone has stated that all education is occupational. This is largely true. Each discipline or specialty in some degree supports each other discipline or specialty. What then is the basis for continued debate over whether a particular program, subject, or institution is "academic" or "vocational?"

We can no longer afford to give lip service to articulation of post-secondary two year educational programs. If we as professionals continue to allow a vacuum to exist we can expect to have the void filled for us. There are many who are willing to step in the breach but their solutions may not be acceptable. Will a legislatured program be as effective as the procedures we professionals could develop? We doubt it!

BIBLIOGRAPHY

Alabama Advisory Council on Vocational Education. Annual Evaluation Report. Auburn, Alabama: Author, 1972.

Alabama State Department of Education. Alabama state plan for vocational education. Montgomery, Alabama: Author, 1973.

Alabama State Department of Education. History of Alabama state junior colleges. Directory: 1971 - Educational programs in Alabama state junior colleges. Montgomery, Alabama: Author, 1971.

Bender, Louis W. Articulation of secondary and post-secondary occupational education programs. Columbus, Ohio: ERIC Clearinghouse on Vocational and Technical Education, 1973.

Butts, R. Freeman, and Cremin, Lawrence A. A history of education in American culture. New York: Henry Holt and Company, 1953.

Cremin, Lawrence A. The transformation of the school; Progressivism in American education, 1876-1957. New York: Alfred A. Knopf, 1961.

Cross, Patricia K. Beyond the open door. San Francisco, California: Jossey-Bass, Inc., 1971.

Del Rossi, Paul R. Second annual evaluation report to the New York advisory council on vocational education. Cambridge, Massachusetts: Arthur D. Little, Inc., 1972.

Durham Technical Institute. Bridging the gap. Durham, North Carolina: Author, 1971.

Education Commission of the States. Report on the task force on occupational education in post-secondary education. Author, 1971.

Florida Community Junior College Inter-Institutional Research Council. Post-secondary occupational education in Florida. Gainesville, Florida: The Institute for Higher Education of the University of Florida, 1972.

Glockner, Melvin J. An analysis of articulation efforts between the university centers of The State University of New York and the public community colleges in New York state. (Doctoral dissertation, University of New York) Ann Arbor, Michigan: University Microfilms, 1968, No. 72-10491.

Graney, Maurice R. The technical institute. New York: Center for Applied Research in Education, 1964.

Hoyt, Kenneth B., Evans, Rupert N., Mackin, Edwin F., and Mangum, Garth L. Career education - What it is and how to do it. Salt Lake City, Utah: Olympus Publishing Company, 1972.

Kintzer, Frederick C. Nationwide pilot study on articulation - Topical paper No. 15. Los Angeles: ERIC Clearinghouse for Junior Colleges, 1970, p. 134.

Kintzer, Frederick C. California plan of articulation. College and University, 1968, 43, 155.

Lilly, Robert F. Clacksmas county school articulation pilot project. Oregon City, Oregon: Clackamas County Board of Education, 1970.

Linksz, James Joseph. A plan for improving articulation in occupational education between public secondary schools and community-junior colleges in Maryland. (Doctoral dissertation, Columbia University) Ann Arbor, Michigan: University Microfilms, 1971. No. 72, 1250.

Manley, Fred W. Articulation between North Carolina's public system of elementary and secondary schools and public system of technical institutes and community colleges. Raleigh, North Carolina: North Carolina Research Coordinating Unit in Occupational Education, 1970.

Martorana, S. V. and Sturtz, A. J. The Higher Education Amendments of 1972. Community College Review, 1973, 1, 4.

Maslow, Abraham H. Toward a psychology of being. New York: Van Nostrand Reinhold Company, 1968.

Miller, Mark E. Issues related to the establishment and governance of a technology program in a comprehensive junior college. (Doctoral dissertation, University of Illinois) Ann Arbor, Michigan: University Microfilms, 1967, No. 68-8171.

Moore, E. B., Jr. A draft master plan for junior colleges and technical institutes. Montgomery, Alabama: Alabama State Department of Education, 1973.

Mundt, John C. Survey of United States' community college systems. Unpublished study, State Board for Community College Education, State of Washington, 1973.

National Association of State Directors of Vocational Education. Position paper - Report on career education concept. Adopted at Las Vegas, Nevada: September, 1971.

National Center for Educational Statistics. Educational directory 1972-73: Higher education. Washington, D. C.: U. S. Government Printing Office, (OE) 73-11404, 1972.

National Council of State Directors of Community Junior Colleges. Position paper - Report on career education concept. Adopted at San Diego, California: November, 1972.

Nie, Norman H., Bent, Dale H., and Hull, C. Hadlai. Statistical package for the social sciences. New York: McGraw-Hill, 1970.

Ogilvie, William. Final report of the articulation study committee to the Illinois board of higher education. DeKalb, Illinois: Northern Illinois University, 1971.

Oregon Board of Education. Articulation and coordination of occupational preparatory curriculums from the high school through the community college - Report of task force 1 & 2. Salem, Oregon: Author, 1968.

Reich, Charles A. The greening of America. New York: Random House, 1971.

Rudolph, Frederick. The American college and university. New York: Alfred A. Knopf, 1962.

Shannon, Thomas A. Has the fourteenth done it again. Phi Delta Kappan, 1972, 53, 466.

Smith, Nathaniel D. The status of and need for technical-institute programs in the public junior college, with a compendium of historical developments. Unpublished masters thesis, Northwestern State University of Louisiana, 1966.

_____ Articulation of Career Oriented Education Programs at the Post-Secondary Level. Unpublished doctoral dissertation. Auburn University, Auburn, Alabama, 1973.

Toffler, Alvin. Future shock. New York: Random House, 1971.

Tyack, David B. Turning points in American educational history. Waltham, Massachusetts: Blaisdell Publishing Company, 1967.

Utah State Board for Vocational-Technical Education. Vocational drafting. Salt Lake City, Utah: Author, 1971.

Publications of the FSU Center for State and Regional Leadership (Since 1972)

TITLE	AUTHOR	DATE
Management Concepts and Higher Education	Louis W. Bender and Richard C. Richardson, Jr.	May, 1972
A Statewide Study: Identified Problems of International Students Enrolled In Public Community/Junior Colleges in Florida	Robert L. Breuder	May, 1972
Reorganizing For the Second Decade: Department of Community Colleges of the State Board of Education of North Carolina	Ben E. Fountain, Jr.	May, 1972
A Proposal For a Management Information System and a Planning, Programming, Budgeting System for the Regional Community Colleges of Connecticut	Searle F. Charles	July, 1972
Danger: Will External Degrees Reincarnate Bogus Degree Mills? A Challenge to State and National Agencies	Louis W. Bender and James A. Davis	July, 1972
Content Analysis As a Research Tool For Higher Education	Melvene Draheim Hardee, Editor	August, 1972
A Master Plan For Unit Cost Among Community Junior Colleges	Howard D. Sims	August, 1972
A Funding Model For Community College Operating Costs	Clement Lausberg	August, 1972
Proceedings of a National Invitation Conference on Post-Secondary Career Education For State Directors of Vocational Education, Community/ Junior Colleges, Adult & Continuing Education	FSU/UF Center for State and Regional Leadership and The Center for Vocational and Technical Education (Ohio State U.), Cosponsors	January 18-20, 1973
First-Level Management: Legal Implications and Responsibilities for Selection and Retention of Faculty	Department of Higher Education, Florida State University	February, 1973
Organizing the Alabama State Junior College System for the Seventies	E. B. Moore, Jr.	April, 1973
A Plan For Planning For a State Community College System	Lee G. Henderson	June, 1973
A Nationwide Study: State-Level Coordination of Student Personnel Services in Community Junior Colleges	George A. Schmidt, Jr.	June, 1973
Long-Range Planning For Community College Education	John C. Mundt	July, 1973
Proceedings of Twelfth Annual Summer Workshop, Southeastern Community College Leadership Program	Joyce Clampitt, Editor	July 18-20, 1973
Institutional Responsibility in the Development of Faculty Dismissal Criteria	H. M. Holderfield and Frank D. Brown	August, 1973
California Views Toward Statewide Governance of Community Colleges	Sidney W. Brossman	September, 1973
One Dupont Circle: National Influence Center for Higher Education	Louis W. Bender and Howard L. Simmons	November, 1973
Articulation of Post-Secondary Programs in Occupational Education	E. B. Moore, Jr.	November, 1973

Complimentary copies of all publications are sent to State Directors of Community/Junior Colleges, University Libraries, National Organizations, and the ERIC Clearinghouse at UCLA. Individual copies may be ordered. A Charge of $2.50 for each monograph ordered is necessary to cover printing and mailing costs. Checks should be made out to Florida State University.